

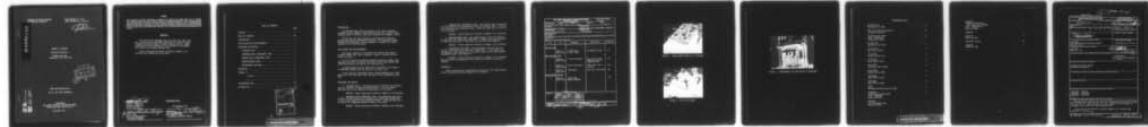
AD-AU46 122 AIR FORCE PACKAGING EVALUATION AGENCY WRIGHT-PATTERSON-ETC F/G 13/4
TEST AND EVALUATION OF BL-755 TALL UNIT CONTAINER.(U)
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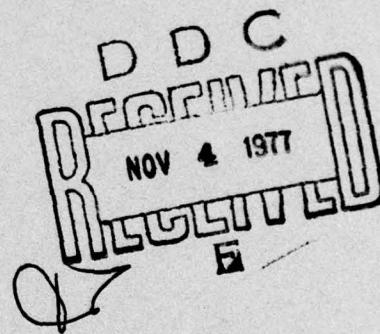
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TEST AND EVALUATION OF
BL-755 TAIL UNIT CONTAINER

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AFALD/PTPD
AIR FORCE PACKAGING EVALUATION AGENCY
Wright-Patterson AFB OH 45433

September 1977

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ABSTRACT

One each BL-755 container with four each inert tail units was received from HQ ADTC/SDMT, Eglin AFB FL at the Air Force Packaging Evaluation Agency, Wright-Patterson AFB OH. Rough handling tests were conducted on the container in accordance with Federal Test Method Standard 101B.

Visual inspection indicated no physical damage to the container upon completion of the tests.

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TABLE OF CONTENTS

	PAGE
ABSTRACT	1
TABLE OF CONTENTS	iii
INTRODUCTION.	1
TEST OUTLINE AND TEST EQUIPMENT..	1
PROCEDURES AND RESULTS.	1
VIBRATION TEST.	1
CORNERSIDE DROP (ROTATIONAL) TEST	1
EDGEWISE DROP (ROTATIONAL) TEST	2
PENDULUM-IMPACT TEST.	2
SUPERIMPOSED LOAD TEST.	2
DISCUSSION.	2
FIGURES: 1	3
2 and 3	4
4	5
DISTRIBUTION LIST	7-8
DD FORM 1473.	9

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iii

INTRODUCTION

HQ ADTC/SDMT Eglin AFB FL requested the Air Force Packaging Evaluation Agency (AFPEA), Wright-Patterson AFB OH to conduct rough handling tests on a BL-755, tail unit container (see Figures 2 and 3).

The BL-755, tail unit container, was fabricated by Hunting Engineering Limited, Bedfordshire, England. The container is manufactured from fiberglass and was designed for shipment and inside storage of four each tail units.

TEST OUTLINE AND TEST EQUIPMENT

Tests were conducted in accordance with Federal Test Method Standard (FTMS) 101B, level A packing. Figure 1 outlines the container test plan.

A L.A.B. Corporation vibration machine, Serial No. 56801, Type 5000-96B, which has a frequency servoloop constant displacement cam linked motor drive, was used for the vibration test.

A pendulum-impact tester fabricated in accordance with Figure 1 of FTMS 101B, Method 5012, was used for the impact test.

A high capacity compression tester, Testing Machines Inc. (TMI) Model No. 17-24, Serial No. 2402, was used for the superimposed load test.

PROCEDURES AND RESULTS

1. VIBRATION TEST: A vibration test was conducted in accordance with the procedure in FTMS 101B, Method 5019. A one inch double amplitude and 4.5 Hz frequency was maintained for two hours.

RESULTS: Visual inspection revealed no damage to the container.

2. CORNERWISE DROP (ROTATIONAL) TEST: The cornerwise drop (rotational) test was conducted in accordance with FTMS 101B, Method 5005. A 24-inch drop height was used during the tests. Drops were made once to each of two diagonally opposite corners of the base.

RESULTS: Visual inspection revealed no damage to the container.

3. EDGEWISE DROP (ROTATIONAL) TEST: The edgewise drop (rotational) test was conducted in accordance with FTMS 101B, Method 5008. A 24-inch drop height was used during the tests. Drops were made once to each end of the container.

RESULTS: Visual inspection revealed no damage to the container.

4. PENDULUM-IMPACT TEST: The pendulum-impact test was conducted in accordance with FTMS 101B, Method 5012. Impact testing was conducted at seven feet per second. Both ends and both sides were impacted.

RESULTS: Visual inspection revealed no damage to the container.

5. SUPERIMPOSED LOAD TEST: The superimposed load test was conducted in accordance with FTMS 101B, Method 5016. A 1,012 pound load was applied to the container for one hour by means of the high capacity compression tester (see Figure 4).

RESULTS: Visual inspection revealed no damage to the container. Side deflection was measured at 0.07 inches at the end of one hour of testing.

DISCUSSION

Visual inspection of the container at the end of the rough handling tests indicated no physical damage to the container.

AIR FORCE PACKAGING EVALUATION AGENCY (Container Test Plan)						AFPEA PROJECT NUMBER 77-P7-32															
CONTAINER SIZE 45x40-5/8x46-1/8	(GROSS) 506	WT 203	(ITEM) CUBE 48.88	QUANTITY 1	DATE 2 Aug 77																
ITEM NAME BL-755 Tail Unit (4 Each)			MANUFACTURER Hunting Engr Ltd., Bedfordshire, England																		
CONTAINER NAME British 135-L10-5354-2823			CONTAINER COST \$900 (Approx)																		
PACK DESCRIPTION Fiberglass																					
CONDITIONING Ambient or as prescribed by test																					
TEST NO.	IAW	PARAMETERS		ORIENTATION	INSTRUMENTED																
<u>VIBRATION TEST</u>																					
1	FTMS 101 Method 5019	1" Double Amp. 4.5 Hz, 2 hours		As required by test	N/A																
<u>ROUGH HANDLING TESTS</u>																					
2	FTMS 101 Method 5005	24 inch drop height		Once to each of two diagonally opposite corners of base	N/A																
3	FTMS 101 Method 5008	24 inch drop height		Once to each end of container	N/A																
4	FTMS 101 Method 5012	7 FPS impact		Both ends - Both sides	N/A																
<u>SUPERIMPOSED LOAD TEST</u>																					
5	FTMS 101 Method 5016	Stack 3 high Ambient Condition			N/A																
<u>COORDINATION</u>																					
COMMENTS	<table border="1"> <thead> <tr> <th>SYMBOL</th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>OTPD</td> <td>Barringer</td> <td>3 Aug 77</td> </tr> <tr> <td>SAUT</td> <td>Clay</td> <td>3 Aug 77</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>						SYMBOL	NAME	DATE	OTPD	Barringer	3 Aug 77	SAUT	Clay	3 Aug 77						
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SAUT	Clay	3 Aug 77																			
PREPARED BY <i>John J. Harrington</i>	APPROVED BY <i>Ralph F. Jacobs</i>																				

FIGURE 1



FIGURE 2. COVER REMOVED FROM BL-755 CONTAINER

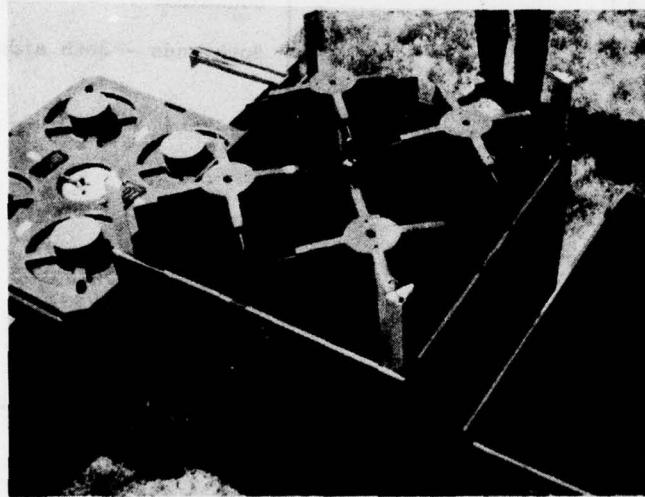


FIGURE 3. BL-755 TAIL UNITS

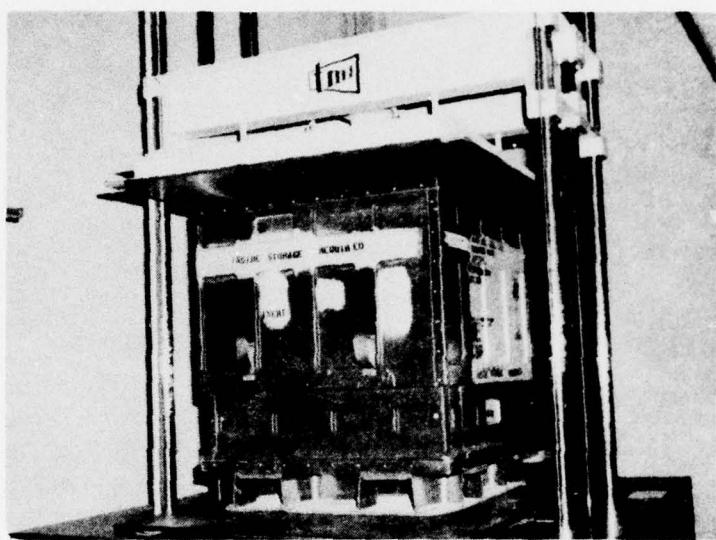


FIGURE 4. SUPERIMPOSED LOAD TEST ON BL-755 CONTAINER

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) One each BL-755 container with four each inert tail units was received from HQ ADTC/SDMT, Eglin AFB, FL at the Air Force Packaging Evaluation Agency, Wright-Patterson AFB OH. Rough handling tests were conducted on the container in accordance with Federal Test Method Standard 101B.		
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